10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Goat Anti-IA2 Antibody

Peptide-affinity purified goat antibody
Catalog # AF1548a

Specification

Goat Anti-IA2 Antibody - Product Information

Application	**WB**
Primary Accession	Q16849
Other Accession	NP_002837, 5798, 19275 (mouse), 116660 (rat)
Reactivity	**Mouse**
Predicted	**Human, Rat**
Host	**Goat**
Clonality	**Polyclonal**
Concentration	**100ug/200ul**
Isotype	**IgG**
Calculated MW	**105848**

Goat Anti-IA2 Antibody - Additional Information

Gene ID 5798

Other Names
Receptor-type tyrosine-protein phosphatase-like N, R-PTP-N, Islet cell antigen 512, ICA 512, Islet cell autoantigen 3, PTP IA-2, PTPRN, ICA3, ICA512

Format
0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
Goat Anti-IA2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Goat Anti-IA2 Antibody - Protein Information

Name PTPRN

Synonyms ICA3, ICA512

Function
Plays a role in vesicle-mediated secretory processes (PubMed:24843546). Required for normal accumulation of secretory vesicles in hippocampus, pituitary and pancreatic islets (By

similarity). Required for the accumulation of normal levels of insulin- containing vesicles and preventing their degradation (PubMed:24843546). Plays a role in insulin secretion in response to glucose stimuli (PubMed:24843546). Required for normal accumulation of the neurotransmitters norepinephrine, dopamine and serotonin in the brain (By similarity). In females, but not in males, required for normal accumulation and secretion of pituitary hormones, such as luteinizing hormone (LH) and follicle-stimulating hormone (FSH) (By similarity). Required to maintain normal levels of renin expression and renin release (By similarity). Seems to lack intrinsic enzyme activity (By similarity). May regulate catalytic active protein-tyrosine phosphatases such as PTPRA through dimerization (By similarity).

Cellular Location
Membrane {ECO:0000250|UniProtKB:Q63259}; Single- pass type I membrane protein {ECO:0000250|UniProtKB:Q63259} Cytoplasmic vesicle, secretory vesicle membrane; Single-pass type I membrane protein. Perikaryon {ECO:0000250|UniProtKB:Q63259}. Cell projection, axon {ECO:0000250|UniProtKB:Q63259}. Synapse {ECO:0000250|UniProtKB:Q63259}. Cell membrane; Single-pass type I membrane protein {ECO:0000250|UniProtKB:Q63259}. Endosome {ECO:0000250|UniProtKB:Q63259}. Note=Detected on neuronal secretory vesicles, but not on synaptic vesicles. Colocalizes with insulin- containing secretory granules (PubMed:25561468). Primarily detected on secretory vesicle membranes. Transiently found at the cell membrane, when secretory vesicles fuse with the cell membrane to release their cargo. Is then endocytosed and recycled to secretory vesicles via the Golgi apparatus membranes. {ECO:0000250|UniProtKB:Q63259, ECO:0000269|PubMed:25561468} [ICA512-cleaved cytosolic fragment]: Nucleus

Tissue Location
Expression is restricted to neuroendocrine cells. Found in pancreas, brain and pituitary.

Goat Anti-IA2 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Goat Anti-IA2 Antibody - Images

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AF1548a (0.5 µg/ml) staining of NIH 3T3 lysate (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.

Goat Anti-IA2 Antibody - Background

The protein encoded by this gene is a member of the protein tyrosine phosphatase (PTP) family. PTPs are known to be signaling molecules that regulate a variety of cellular processes including cell growth, differentiation, mitotic cycle, and oncogenic transformation. This PTP possesses an extracellular region, a single transmembrane region, and a single catalytic domain, and thus represents a receptor-type PTP. This PTP was found to be an autoantigen that is reactive with insulin-dependent diabetes mellitus (IDDM) patient sera, and thus may be a potential target of autoimmunity in diabetes mellitus.

Goat Anti-IA2 Antibody - References

Evidence for molecular mimicry between human T cell epitopes in rotavirus and pancreatic islet autoantigens. Honeyman MC, et al. J Immunol, 2010 Feb 15. PMID 20083660.
Triple chimeric islet autoantigen IA2-ZnT8WR to facilitate islet autoantibody determination. Yu L, et al. J Immunol Methods, 2010 Feb 28. PMID 20035758.
Autoantibodies and associated T-cell responses to determinants within the 831-860 region of the autoantigen IA-2 in Type 1 diabetes. Weenink SM, et al. J Autoimmun, 2009 Sep. PMID 19447008.
A new luminescence assay for autoantibodies to mammalian cell-prepared insulinoma-associated protein 2. Burbelo PD, et al. Diabetes Care, 2008 Sep. PMID 18535195.
Autoantibodies to islet antigen-2 are associated with HLA-DRB1*07 and DRB1*09 haplotypes as well as DRB1*04 at onset of type 1 diabetes: the possible role of HLA-DQA in autoimmunity to IA-2. Williams AJ, et al. Diabetologia, 2008 Aug. PMID 18504544.